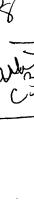






- 1. A method for promoting central nervous system axon growth in a patient in need of axon regeneration comprising administering to the patient an effective amount of at least one rho protein inhibitor.
- 2. A method according to claim the wherein the patient is treated by mechanical introduction of rho protein inhibitor to the axons or their non-neuronal support tissue.
- 3. A method according to claim wherein rho protein inhibitors are introduced by administering to the patient replication-deficient adeno, adeno-associated, or herpes viruses that express inhibitors.
- 4. A method according to claim 3 wherein the inhibitors are expressed in adeno viruses.
- 5. A method according to claim 3-wherein the inhibitors are expressed in adeno-associated viruses.
- 6. A method according to claims 1, 2, 3, 4, or 5 wherein the rho protein inhibitors are selected from the group consisting of rho, rac, and cdc42 inhibitors, and mixtures thereof.
- 7. A method according to claims 1, 2, 3, 4, or 5 wherein the inhibitor is C. botulinum C3 exoenzyme.
 - 8. A method according to claim 7 wherein the patient is treated by administration of a chimeric C. botulinum C2/C3 inhibitor to the patient.



- 9. A method according to claims 1, 2, 3, 4, 5 or 8 wherein the patient suffers from acute or chronic spinal cord injury.
- 10. A method according to claims 1, 2, 3, 4, 5, or 8 wherein the patient suffers from white matter stroke.
- 11. A method according to claims 4, 2, 3, 4, 5, or 8 wherein the patient is suffering from traumatic brain injury.
 - 12. A pharmaceutical composition for treatment of central nervous system injury comprising a rho protein inhibitor in a pharmaceutically acceptable carrier.
 - 13. A composition according to claim 12 which comprises C. botulinum C3 exoenzyme.
 - 14. A composition according to claim 13 wherein the exoenzyme is expressed by a replication-defective adeno, adeno-associated or herpes viruses.
 - 15. A composition according to claim 14 wherein the exoenzyme is expressed by an adenovirus.
 - 16. A composition according to claim 14 wherein the exoenzyme is expressed by an adeno-associated virus.
 - 17. A composition according to claim 12 which comprises a chimeric C2/C3 C. botulimun exoenzyme contruct.
 - 18. A composition according to claim 17 wherein the exoenzyme construct is expressed by a replication-defective adeno, adeno-associated or herpes virus.

- 19. A method for screening for the presence or absence of axon regenerative activity of a compound comprising assaying for rho protein inhibitory activity of the compound.
- 20. A method according to claim 19 wherein the rho protein is rac1.

